

Remarks:

Claims 9, 10, and 12-19 are now pending in this application. Applicants have amended claim 9 and cancelled claim 11 to clarify the present invention. Applicants respectfully request favorable reconsideration of this application.

The Examiner rejected claims 9-11 under 35 U.S.C. § 102(b) as being anticipated by WO 01/70128 to Nielsen. The Examiner rejects claimed 12-18 under 35 U.S.C. § 103(a) as being unpatentable over Nielsen in view of WO 99/13795 to Salomonson.

Nielsen does not disclose the present invention as recited in amended independent claim 9 since, among other things, Nielsen does not disclose a method that includes prior to a single heat treatment step applying a premixed suspension including aluminum oxide particles to densely sintered high strength ceramic individual bridge parts, drying the suspension to form a joint of particles between the bridge parts, and applying a suspension including glass material to the joint of particles. Nielsen also does not disclose a method that includes carrying out the single step heat treatment after applying the layer of particles and the suspension of glass material. Furthermore, Nielsen does not disclose forming particle reinforced glass between the bridge parts wherein the particles are entirely surrounded by glass after the one step heat treatment. Claim 9 clearly recited that the premixed suspension including aluminum oxide particles is applied and dried and the suspension including glass material is applied prior to the single step heat treatment.

On the other hand, Nielsen discloses a two step heat treatment. As described at page 2, line 34, through page 3, line 13, Nielsen discloses assembling a bridge frame, a first heating of the bridge frame, applying an infiltration to the bridge frame and a second heating of the bridge frame and infiltration. Clearly, Nielsen does not disclose a one step heat treatment. Additionally, Nielsen does not disclose carrying out applying a suspension including aluminum oxide particles to bridge parts, drying the suspension, and applying a suspension of glass material to the layer of particles prior to a single step heat treatment.

Nielsen disclosed first sintering the binding agent including basic material. According to this process, the basic material will adhere to the parts. No glass will be formed between the parts and the basic material, as described at page 3 of the present specification. Nielsen discloses renewed heat treatment. On the other hand, the invention recited in claim 9 includes a one step heat treatment. Nielsen discloses applying an infiltration material to the sintered glass material and then carrying out a sintering operation.

In view of the above, Nielsen does not disclose all elements of the present invention as recited in newly amended independent claim 9 or claim 10, which depends from claim 9. Since Nielsen does not disclose all elements of the present invention as recited in claims 9 and 10, the present invention, as recited in claims 9 and 10, is not properly rejected under 35 U.S.C. § 102(b). For an anticipation rejection under 35 U.S.C. § 102(b) no difference may exist between the claimed invention and the reference disclosure. *See Scripps Clinic and Research Foundation v. Genentech, Inc.*, 18 U.S.P.Q. 841 (C.A.F.C. 1984).

Along these lines, anticipation requires the disclosure, in a cited reference, of each and every recitation, as set forth in the claims. *See Hodosh v. Block Drug Co.*, 229 U.S.P.Q. 182 (Fed. Cir. 1986); *Titanium Metals Corp. v. Banner*, 227 U.S.P.Q. 773 (Fed. Cir. 1985); *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 1 U.S.P.Q.2d 1081 (Fed. Cir. 1986); and *Akzo N.V. v. U.S. International Trade Commissioner*, 1 U.S.P.Q.2d 1081 (Fed. Cir. 1986).

The combination of Nielsen and Salomonson does not disclose the present invention as recited in claims 12-18, which depend from claim 9, since, among other things, the combination does not suggest carrying out applying a suspension including aluminum oxide particles to bridge parts, drying the suspension, and applying a suspension of glass material to the layer of particles prior to a single step heat treatment. Along these lines, Neither Nielsen nor Salomonson suggests a method of making artificial dental bridges that includes prior to heat treatment applying a suspension including aluminum oxide particles to individual bridge parts, drying the suspension to form a layer of particles, and applying a suspension of glass material to the layer of particles, and heat treating the individual bridge parts with the applied layer of particles and the suspension of glass material with a one step heat treatment. Salomonson et al. does not suggest applying a suspension of particles and drying the suspension. The dried particle network provides the bridge with a sufficient strength to permit the bridge to be transported to a heating device without requiring a support structure. Additionally, Salomonson et al. does not suggest particle reinforced glass. The particle reinforced glass of the present invention has a higher resistance to cracking than the pure glass material suggested by Salomonson et al. Furthermore, Salomonson et al. does not suggest a one step heat treatment.

As recited in claim 9, the method forms particle reinforced glass between the bridge parts where the particles are entirely surrounded by glass after the one step heat treatment. This is described in the specification as page 2, lines 15-25. As described in the specification, the claimed invention results in "The glass material fully wets the surface of the densely sintered parts forcing the particles away from the surface. The glass will also wet the surface of each of the individual particles such that the final joint will be pure glass on the surface of the densely sintered parts and a particle reinforced glass (i.e. non-touching particles) a short distance away from the surface. Since no particles are in contact with the surface of the densely sintered parts the material binding the parts together is the glass and the particles act to only increase the strength of the glass material." As a result, the claimed invention produces bridge parts held together as one core in an improved manner and a method that requires less heat treatment steps than the cited references.

In view of the above, the combination of Nielsen and Salomonson does not suggest the present invention as recited in claims 12-18.

In view of the above, the references relied upon in the office action, whether considered alone or in combination, do not disclose or suggest patentable features of the present invention. Therefore, the references relied upon in the office action, whether considered alone or in combination, do not anticipate the present invention or make the present invention obvious. Accordingly, Applicants respectfully request withdrawal of the rejections based upon the cited references.

In conclusion, Applicants respectfully request favorable reconsideration of this case and early issuance of the Notice of Allowance.

If an interview would advance the prosecution of this case, Applicants urge the Examiner to contact the undersigned at the telephone number listed below.

The undersigned authorizes the Commissioner to charge fee insufficiency and credit overpayment associated with this communication to Deposit Account No. 22-0261.

Respectfully submitted,

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